



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,149	09/27/2004	Mark Livingstone	2733.14US01	5034

24113 7590 04/19/2006

PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A.
4800 IDS CENTER
80 SOUTH 8TH STREET
MINNEAPOLIS, MN 55402-2100

EXAMINER

HOLZEN, STEPHEN A

ART UNIT PAPER NUMBER

3644

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/509,149

Applicant(s)

LIVINGSTONE ET AL.

Examiner

Stephen A. Holzen

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 11, 12 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11, 12 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/30/2006 have been fully considered but they are not persuasive.

Applicant has argued the Booth reference no longer anticipates the claimed invention since the applicant amended the independent claims such that the word "metallic" does not appear in the preamble, and instead appears in the body of the claims. The examiner finds this argument persuasive. Booth does not teach a metallic skin and therefore can not anticipate the claimed.

Applicant has further argued that claim 2 is not anticipated because it requires a monolithic structure. This argument is rendered moot in light of amendments made to claim 1.

Applicant has argued that it would not be obvious to make the structure Booth from metal because:

- i. Booth dates back to the early 20th century and "one of ordinary skill in the art would consider references this old" and opines: modern wings do not use the structure of Booth to prevent buckling, and therefore anyone concerned about buckling would not use Booth's structure.
- ii. Booth and the present invention are directed to different problems
- iii. Booth does not teach a monolithic structure.

The examiner is not persuaded with these arguments because:

- i. Contentions that the reference patents are old are not impressive absent a showing that the art tried and failed to solve the same problem notwithstanding its presumed knowledge of the references. See *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977). Unless the applicant has solved buckling entirely and can support this with an affidavit, the age of the reference is of no consequence.
- ii. A comparison between the prior art and the claimed invention begins with the similarities of structure. Booth teaches the applicant's claimed structure and the fact that Booth is concerned with a different problem is of no consequence. The claim is not a method claim that would be directed to solving a specific problem, nor has that problem been stated in the claims. The claim is an apparatus claim, and apparatus claims are only limited by structure, not function (be it in the claims or in the specification). While features of an apparatus may be recited either structurally or functional, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. Apparatus claims cover what a device is, not what a device does. A claim (and argument) containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the

claimed apparatus from a prior art apparatus if the prior apparatus teaches all the structural limitation of the claims. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d, 1429, 1431-.2 (Fed. Cir. 1997); Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990); Ex parte Masham, 2 USPQ 2d 1647 (Bd. Pat. App. & Inter. 1987).

iii. Applicant has defined "monolithic structure" as follows: "The invention is of particular application to metallic wing skins, for example, where the wing skin (which may comprise a portion only of the entire wing skin for a wing of an aircraft) is in the form of a monolithic structure." (underlining added by examiner). Further the applicant states "...panel 1 is a monolithic aluminum alloy structure that has...". It can be seen that panel #1 is only a small portion of the wing skin. Therefore it is not the entire wing that must be "monolithic" but only a strip thereof. Wood teaches in Figure 4, five monolithic strips.

2. If applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. If the traverse was inadequate, the examiner should include an explanation as to why it was inadequate. (MPEP 2144.03).

Art Unit: 3644

The applicant has failed to traverse the examiner's assertion of official notice, therefore the common knowledge assertions by the examiner are taken to be admitted prior art.

3. Claims 1-6, 11-12, 15, 16, 17 are pending
4. Claims 1-6, 11-12, 15, 16, and 17 acted upon.
5. The applicant should note that while claim 16 is dependant from claim 13 (cancelled) the examiner has considered the claim to be dependant from claim 12 for the purposes of examination. Correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, 11, 12, 15, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Booth (GB 195,686).

Booth discloses an aircraft wing's skin having a first and second surface. The first surface forms the external surface of an aircraft wing and the second surface forms the interior surface of the wing. The skins are comprised of a plurality of strips extending in substantially the same direction.

The only difference between the prior art and the presently claim invention is that Booth discloses that the strips are made from wood, and the applicant's preamble claims a "metallic skin".

Applicant has admitted that metal has increased strength over wood.

It would have been obvious to one having ordinary skill in the art to make the wooden strips of Booth from metal since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin 125 USPQ 416.

Re – Claim 3: Booth discloses in Figure 5 a thickness of the wing ski is substantially constant across at least 90% of the width.

Re – Claim 4: Booth discloses in Figures 4 and 5 a skin having a plurality of strip junction each joining two strips in the direction in which the strips extend, and having an interface surface capable of receiving a rib foot of a single rib extending along the wing skin, and capable of being arranged so that the interface surfaces are substantially parallel to the first surface and substantially parallel to the surfaces of rib feet that interface with the respective interface surfaces. (Note that the application is not claiming the combination of ribs and spars, only the capability of using the skin to interface thereto; presently only the subcombination wing skin is being claimed.)

Re – Claim 5: The strips are illustrated as adjacent to each other

Re – Claim 16: Booth discloses all the structural limitations found in this claim. The process of making these structures is immaterial when considering patentability, since it is the structure that holds patentable weight and not the process by which the product is made. See MPEP 2113: The patentability of a product does not depend on its method of product. If the product made by the product-by process claim is the same as or obvious from the product of the prior, art the claim is unpatentable even though the prior product was made by a different process. In re Thorpe 777 F.2d 695 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Booth as applied above and further in view of Dornier (2,310,765). Booth discloses every aspect of the present invention except wherein the skin is used with stringers and ribs. Dornier teaches that it is well known in the art to support a wing and wing skin with spars and ribs. It would have been obvious to use spars and ribs as taught by Dornier in the wing formed by the wing skin of Booth for the purpose of increasing wing strength.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Booth in view of ordinary skill in the art.

Booth discloses an aircraft wing's skin having a first and second surface. The first surface forms the external surface of an aircraft wing and the second surface forms the interior surface of the wing. The skins are comprised of a plurality of strips extending in substantially the same direction.

Booth discloses that the strips are made from wood, and the applicant's preamble claims a "metallic skin".

Applicant has admitted that metal has increased strength over wood.

It would have been obvious to one having ordinary skill in the art to make the wooden strips of Booth from metal since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin 125 USPQ 416.


Booth does not specifically disclose the gradient between strips. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the step between strips to have a maximum gradient of less than 1:1 since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boeson, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen A. Holzen whose telephone number is 571-272-6903. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sah


TERI PHAM LUU
SUPERVISORY
PRIMARY EXAMINER